merrychef

Mealstream 501

SERVICE MANUAL

Part No. 32Z3387 Issue No.2

For all Mealstream 501 models manufactured from January 2001

SERVICE MANUAL

CAUTION MICROWAVE EMISSIONS

DO NOT BECOME EXPOSED TO EMISSIONS FROM THE MICROWAVE GENERATOR OR PARTS CONDUCTING MICROWAVE ENERGY

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SAFETY CODE

This manual is designed to assist engineers who have been on a recognised product familiarisation and training course run by Merrychef Limited. It has been prepared to offer technical guidance for the Merrychef Mealstream 501 range of Combination Microwave Ovens.

Please remember that it is wiser **not** to attempt a service task if you are unsure of being able to complete it competently, quickly, and above all **safely**.

To avoid injury to yourself, and to protect the appliance from possible damage, please follow this Safety Code when servicing these ovens.

Before attempting to repair the oven, check it for microwave leakage.

Check that the oven is not emitting microwaves, even when supposedly not in operation.

Check that the oven is not operating continuously, whether the display indicates cooking or not.

Always discharge the HT capacitors before working on the oven using a suitably insulated 10 MΩ Resistor

---

Before removing the rear cover from the oven, ensure you do the following:

- Switch off the mains supply and remove the plug from the wall socket.

or

- If the oven is hard wired, ensure that the power is turned off at the isolator switch.

Note:

The On/Off switch on the oven is **not** adequate protection against electric shock, as it does not isolate all of the internal wiring from the mains.

Upon completion of a service on a Mealstream oven, or before reconnecting the appliance to the mains supply for testing, check all of the following points:

- All internal electrical connections are correct (see wiring diagram Pages 25-26).
- All wiring insulation is correct and is not touching a sharp edge.
- All Earth connections are electrically and mechanically secure.
- All door safety interlocks are secure and mechanically sound.
- The door operation is smooth, and the arms run freely in the slots.
- The door activates all three of the door interlock switches **in the correct order**.
- The temperature sensor is correctly connected to the Power PCB.

Before finishing the service call, recheck the following points:

- All of the electronics are functioning correctly, and all of the touch pads are working.
- The power output of the oven is correct.
- Microwave emission is below permissible limit - 5 mW/cm² (see BS EN 60335-2-90).
- Oven has correct 50mm air gap all round and 50mm above.
  Air flow should not be restricted.
- Clean air filters are in place.

Product specifications:

Model Number: **CTMx v f c p MK**

Example CTM524505MK
Mealstream 501, High speed fan
230-240V, 50Hz, Series 5 electronic controls & MenuKey

prefix	**x** **Fan Speed**	**v** **Voltage**	**f** **Frequency**	**c** **Control Type**	**p** **Phase**	**MK** **MenuKey**
CTM	3 = Low speed 5 = High speed	22 = 220-230V EU 24 = 230-240V UK	50 = 50 Hz 60 = 60 Hz	5 = Electronic CD2 = Rotary Dial Controls	2 = 2 phase 1 = 1 phase Omitted	MK = MenuKey fitted

Power Requirements	Refer to rating Plate	
Power Output: CTM3 CTM5	Microwave 100% Convection Combination Convection Combination	1425W (IEC 705) 2500W 1425W + 2500W 3000W 1425W + 3000W
External Dimensions	Height Width Depth	640mm (Plus 50mm minimum clearance above) 710mm (Plus 50mm minimum clearance each side) 630mm (Plus 50mm clearance behind)
Internal Dimensions	Height Width Depth Capacity	260mm 490mm 360mm 45.86 litres (1.62 ft³)
Weight	Nett Gross packed	90kg 106kg
Construction	Cavity Casework	304 Stainless Steel
Settings	Microwave Temperature Timer	100%,75%,50%,25%, Convection only Off, 150°C, 175°C, 200°C, 225°C, 250°C Up to 30 minutes Up to 3 cooking stages of up to 30 minutes each Programmed (Series 5)

Installation instructions:

Installation Instructions for Mealstream 501 Combination Ovens

Power Supply Requirements

The **Mealstream 501 oven** should be connected to a suitable electricity supply, which can cope with the switching-on surge that occurs with certain types of catering equipment, such as microwaves. Because of this requirement, we strongly recommend that a separate, suitably rated supply is installed for the oven.

The supply for the oven should be fitted with a **Type "C"** circuit breaker, rated at:

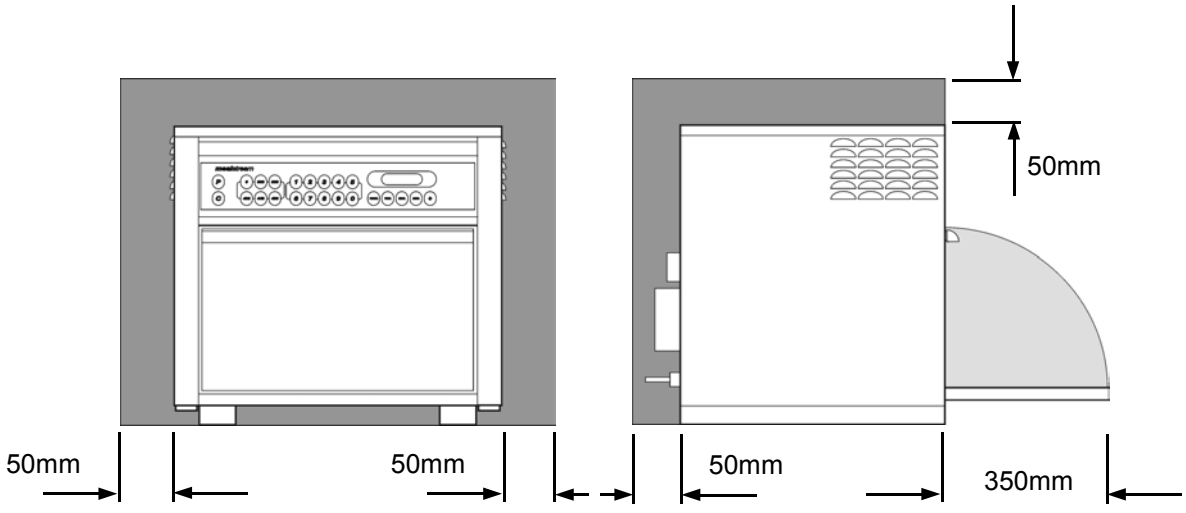
30 Amp for Mealstream 501 (all models)

If the oven is hard-wired to the supply, a double-pole isolator switch with a contact gap of at least 3mm should be fitted and positioned close to the oven to allow the oven to be moved for servicing.

Positioning the Oven

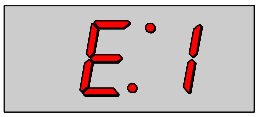
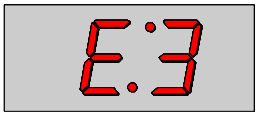
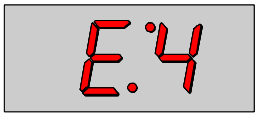
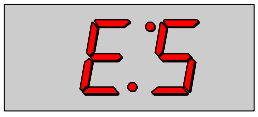
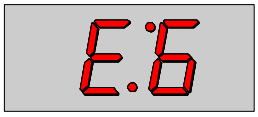
In order to maintain adequate ventilation for air intake and exhaust, and to allow access for cleaning filters, you must allow a minimum of 50mm clearance at the sides and rear of the oven, and at least 50mm above. Air intake temperature should not exceed 35°C - excessive temperature will lead to reduced operating duty cycle or premature ageing of internal components.
Failure to comply with these conditions will invalidate the warranty.

NEVER	Install an oven above fryers, grills, griddles or any other major heat source.
NEVER	Stack machines on top of each other - always use a double stand.
ALWAYS	Place containers in the cavity carefully - impact damage may chip the vitreous enamel coating on the runners and baffle plate.

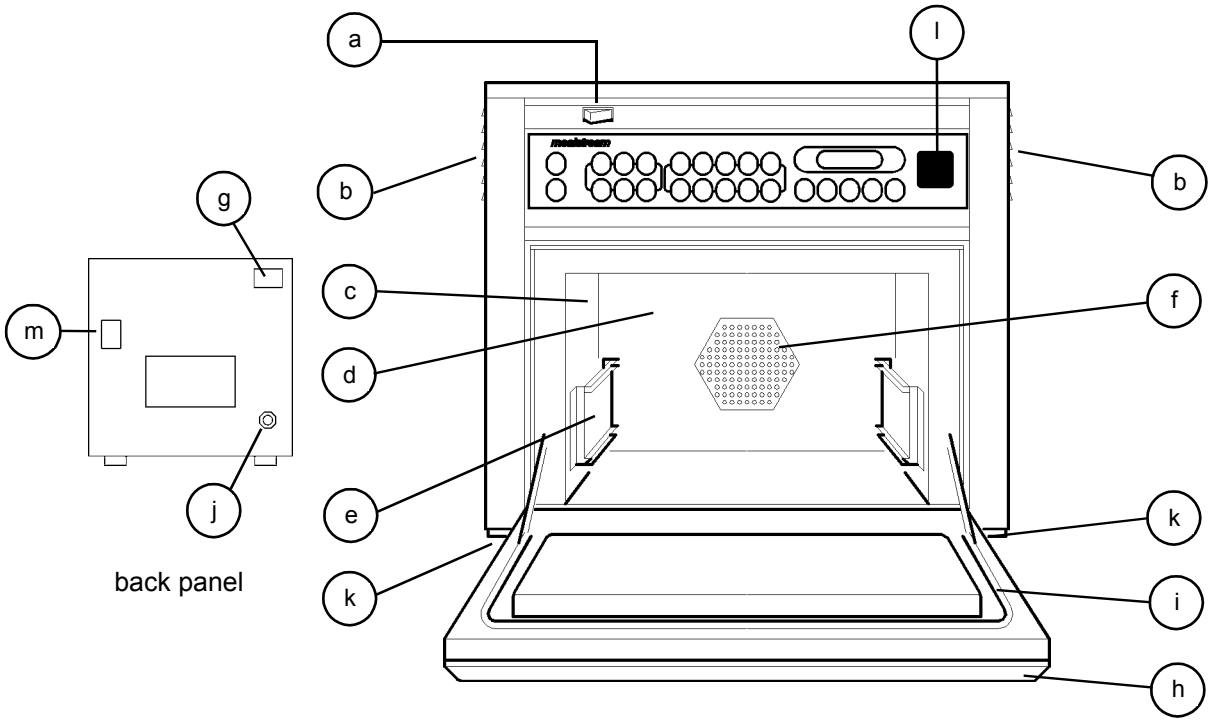


Error codes and diagnostics

The Mealstream EC501 will identify some of the most common problems by flashing an error message code in the time display window.

Error Message		Possible Cause	Service
	1 2	Door not fully shut Possible electrical fault	Close door fully Check Microswitch Door Circuit Check Microswitch Connection to PCB Check Ribbon Cable Check Relay PCB & Logic PCB
	1 2 3 4 5	No time has been set Invalid time has been set Invalid program has been set Number pad failure Memory Failure running a Program	Set a time Set a valid time Use call-back to check program (MenuKey: no key downloaded) Membrane key short circuit Re-Program Pad, if fault repeats replace Logic PCB
	1 2	Oven not heating up Possible Heater circuit fault	Check heater fuse Confirm operation of heater, overheat stat and heater circuit
	1	Oven Cavity overheating	Check cavity sensor Confirm heater relay is operating
	1	Oven is not at correct temperature to start program **Operator Error !!**	Allow oven to reach correct Programmed temperature
	1	Oven control area is overheating.	Check air filters Check axial fan Check installation for hot air intake
		MenuKey removed before the download is complete or the process has been interrupted.	Switch oven off and begin the MenuKey download again.

Main features:



a On/Off SWITCH

This is used to turn the oven On or Off.
IT DOES NOT ISOLATE INTERNAL WIRING FROM THE MAINS SUPPLY.

b HOT AIR VENTS

Allows steam and excess pressure to escape from the oven cavity. It must be kept clear.

c OVEN CAVITY

The oven cavity is mainly constructed from stainless steel panels. It must be kept clean.

d BAFFLE PLATE

Forms the inside rear of the oven and covers the hot air circulation fan. This must be cleaned on a regular basis, and kept free of debris.

e RUNNERS

These are mounted on each side of the oven cavity to support the rectangular racks or oven trays and are for use in **Convection mode only**.

f HOT AIR FAN

Situated behind the baffle plate, and circulates the hot air through the baffle plate, over the heating element, and around the edge of the baffle plate back into the cavity.

g RATING PLATE

The rating plate is situated on the rear of the oven, and states the Model, Serial Number, Electrical Ratings and Manufacturers telephone number.

h DOOR

The door consists of a thermally insulated inner section, and an additional air gap provided by a twin skinned door front to lower the surface temperature.
It is important that the choke plate and the slots are free from debris.

i DOOR SEAL

j MAINS LEAD

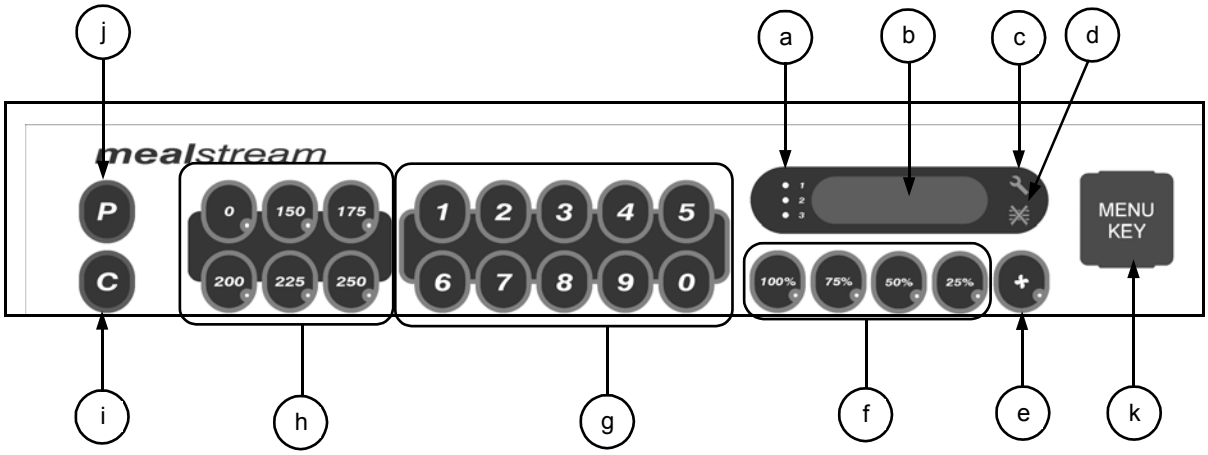
k AIR FILTERS

Main intake for cooling air for internal components. Must be clear of obstructions.

l MenuKey

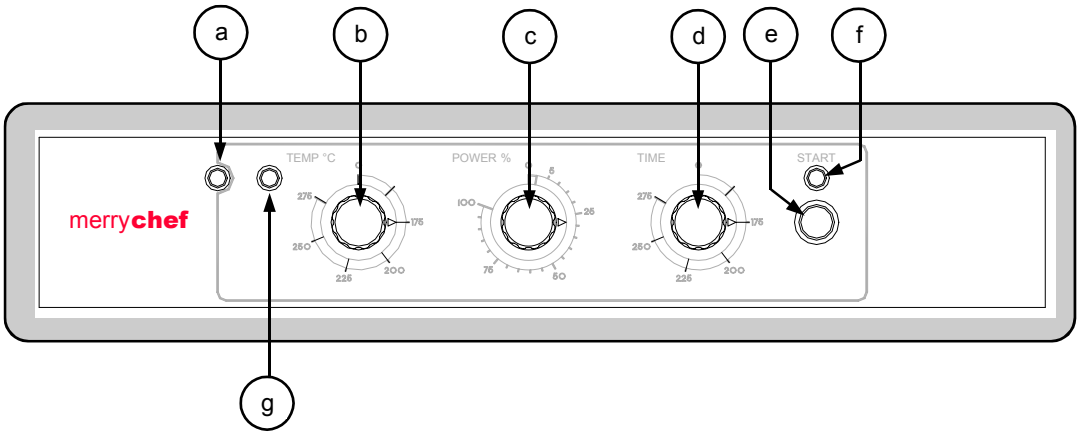
m STEAM OUTLET

Electronic controls:



a	Stage LED's
b	Program & Time Display
c	Service Indicator
d	Air Filter Block Indicator
e	Convection Pad
f	Power Pads
g	Time / Program Number Pads
h	Temperature Set Pads
i	Cancel / Callback Pad
j	Program Pad
k	MenuKey socket

Manual controls:



a	Power Neon (Amber)
b	Temperature Control
c	Power Control
d	Timer
e	Start Push button
f	Cook cycle Neon (Red)
g	Heater Neon (Amber)

Procedure A - Power Output Test in accordance with BS EN 60335-2-90 Annex AA

This test is given in the BSI test standard for microwave ovens. It is reproduced below - not so that you can follow it, but to show you why it is impractical in normal conditions. A simplified procedure, which gives a good approximation to the BSI power output, is given in Procedure B which follows.

Note: This test can only be carried out on a **COLD** oven. If the oven has been operating, even for only a few seconds, the power given will be lower than the oven rating. This test must also be carried out at a stable voltage - the voltage in most kitchens varies considerably even within the period of the test. If the oven has been operating, go to **Procedure B.**

You will need:

A thermometer capable of reading to ±0.1°C.
A cylindrical borosilicate glass container, 190 mm diameter, with a wall thickness of 3 mm or less.
A calculator.
A set of scales capable of reading 1kg to an accuracy of ± 1g.
A glass or plastic stirrer.
A jug capable of holding over 1 litre of water.
Drinkable water which is at a temperature of 10°C ± 1°C.
A "Variac" or similar variable transformer capable of supplying the oven to ensure a stable voltage.

WARNING: *The Borosilicate Glass container has thin walls and is therefore fragile - take care not to break it during use.*

Method

A cylindrical container of borosilicate glass is used for the test. It has a maximum thickness of 3mm, an external diameter of approximately 190mm and a height of approximately 90mm. The mass of the container is determined.

At the start of the test, the oven and the empty container are at ambient temperature. Potable water having an initial temperature of 10°C ± 1°C is used for the test. The temperature of the water is measured immediately before it is poured into the container.

A quantity of 1000g ± 5g of water is added to the container and its actual mass obtained. The container is then immediately placed in the middle of the oven base. The appliance is supplied at rated voltage and operated at the maximum power setting. The time for the water temperature to attain 20°C ± 2°C is measured. The oven is then switched off and the final water temperature is measured within 60seconds.

NOTES:

1 The water is stirred before its temperature is measured.
2 Stirring and measuring devices are to have a low heat capacity.

The microwave power output is calculated from the formula:

$$P = \frac{4.187\ M_W\ (T_2-T_1) + 0.55\ M_C\ (T_2-T_0)}{t}$$

where

P is the microwave power output, in watts;
M_W is the mass of the water, in grams;
M_C is the mass of the container, in grams;
T_0 is the ambient temperature, in °C;
T_1 is the initial temperature of the water, in °C;
T_2 is the final temperature of the water, in °C;
t is the heating time in seconds, excluding the magnetron filament heat-up time.

Procedure B - Simplified Power Output Test

You will need:

A thermometer capable of reading to ±0.1°C.
A Polypropylene tray approximately 200 mm x 200 mm.
A measuring jug.
A calculator.
Water which is at a temperature of 10°C ± 2°C.

1 Measure 1 litre of cold water into the tray using the measuring jug.
2 Measure the water temperature, and record it as T[s].
3 Place the tray in the oven and close the door.
4 Turn the oven on.
5 Set the timer to 1:02. (For Manual controls use a stopwatch set to 1 minute 2 seconds)
6 Press the "100%" power pad.
7 When the oven bleeps, open the door and remove the tray.
8 Stir the water thoroughly, and measure its temperature. Record this as T[e].

Calculation:

1 T[r] = T[e] - T[s].
2 Power = 70 x T[r]. Power is in Watts.

The power given by the above test should be within ±10% of the rated power.

Procedure C - Power Transformer Test

You will need:
A Digital Multi-meter (D.M.M.)
A Megger or similar resistance meter using 500V d.c.

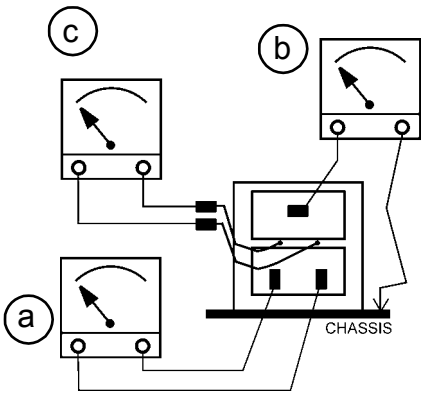
1 Isolate the oven from the mains supply.

WARNING: *High voltages and large currents are present at the secondary winding and filament winding of the Power Transformer. It is very dangerous to work near this part when the oven is on. NEVER make any voltage measurements at the High Voltage circuits, including the magnetron filament.*

WARNING: *Even when the oven is not cooking, the Power Transformer has High Voltages present because of the Soft Start circuit. Isolate the oven before testing.*

2 Ensure that the High Voltage Capacitor is discharged before commencing work.
3 Remove all connections from the Power Transformer.
4 Using a D.M.M., check the continuity of the windings. Results should be as follows:

a	Mains winding between tags	Approx. 1.3 Ω
b	High Voltage winding	Approx. 82 Ω
c	Filament winding between terminals	Less than 1 Ω



5 Using a Megger, test the insulation resistance between:

Primary winding and chassis	Pass if over 10 MΩ
Filament winding and chassis	Pass if over 10 MΩ

One end of the High Voltage winding is connected to the chassis, so this is not tested.

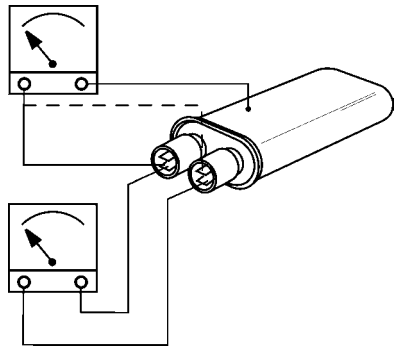
Procedure D - High Voltage Capacitor Test

You will need: A Digital Multi-meter (D.M.M.)
A Megger or similar resistance meter using 500V d.c.

WARNING: High voltages and large currents are present at the High Voltage Capacitor. It is very dangerous to work near this part when the oven is on. **NEVER** make any voltage measurements at the High Voltage circuits, including the magnetron filament .

WARNING: Even when the oven is not cooking, the High Voltage Capacitor has High Voltages present because of the Soft Start circuit. Isolate the oven before testing.

1. Isolate the oven from the mains supply.
2. Ensure that the High Voltage Capacitor is discharged before commencing work.
3. Remove all connections from the High Voltage Capacitor.
4. Using a D.M.M., check for continuity between the terminals & compare results with table.



Between Terminals	Pass if approximately 10 MΩ
Between Terminals and Case	Pass if open circuit

5. Using a Megger, test the insulation resistance between the terminals and the case.

Between Terminals and Case	Pass if over 100 MΩ

Procedure E - High Voltage Rectifier Test

You will need:

A Megger or similar resistance meter using 500V d.c.

WARNING: High voltages and large currents are present at the High Voltage Rectifier. It is very dangerous to work near this part when the oven is on. NEVER make any voltage measurements at the High Voltage circuits, including the magnetron filament .

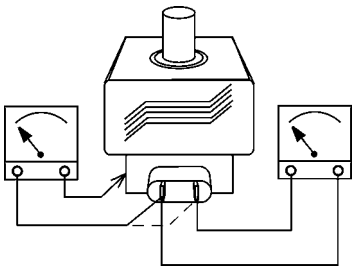
WARNING: Even when the oven is not cooking, the High Voltage Rectifier has High Voltages present because of the Soft Start circuit. Isolate the oven before testing.

1. Isolate the oven from the mains supply.
2. Ensure that the High Voltage Capacitor is discharged before commencing work.
3. Remove all connections from the High Voltage Rectifier.
4. Using the Megger, test for continuity in both directions. Compare results with the table.

Open Circuit both ways	**FAIL**
Conducts one way only	**PASS**
Short Circuit both ways	**FAIL**
Conducts one way, leaks the other	**FAIL**

Procedure F - Magnetron Test

You will need:
A Megger or similar resistance meter using 500V d.c.

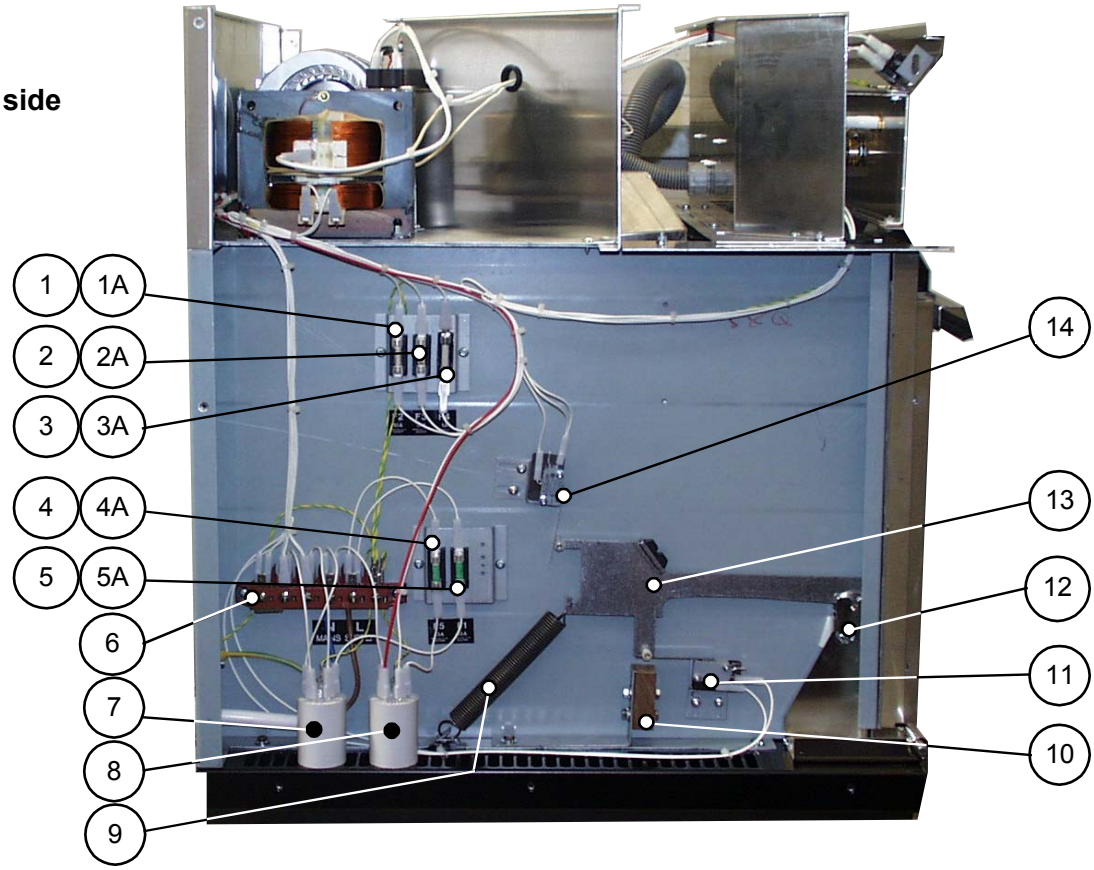


A Magnetron can be tested for an open filament or a short circuit by carrying out a continuity check.

1. Isolate the oven from the mains supply.
2. Ensure that the High Voltage Capacitor is discharged before commencing work.
3. Remove all connections from the Magnetron.
4. A continuity check across the Filament terminals should be 1ohm or less
5. A continuity check between each filament terminal and the metal outer should read open.

Principle components:

Left side

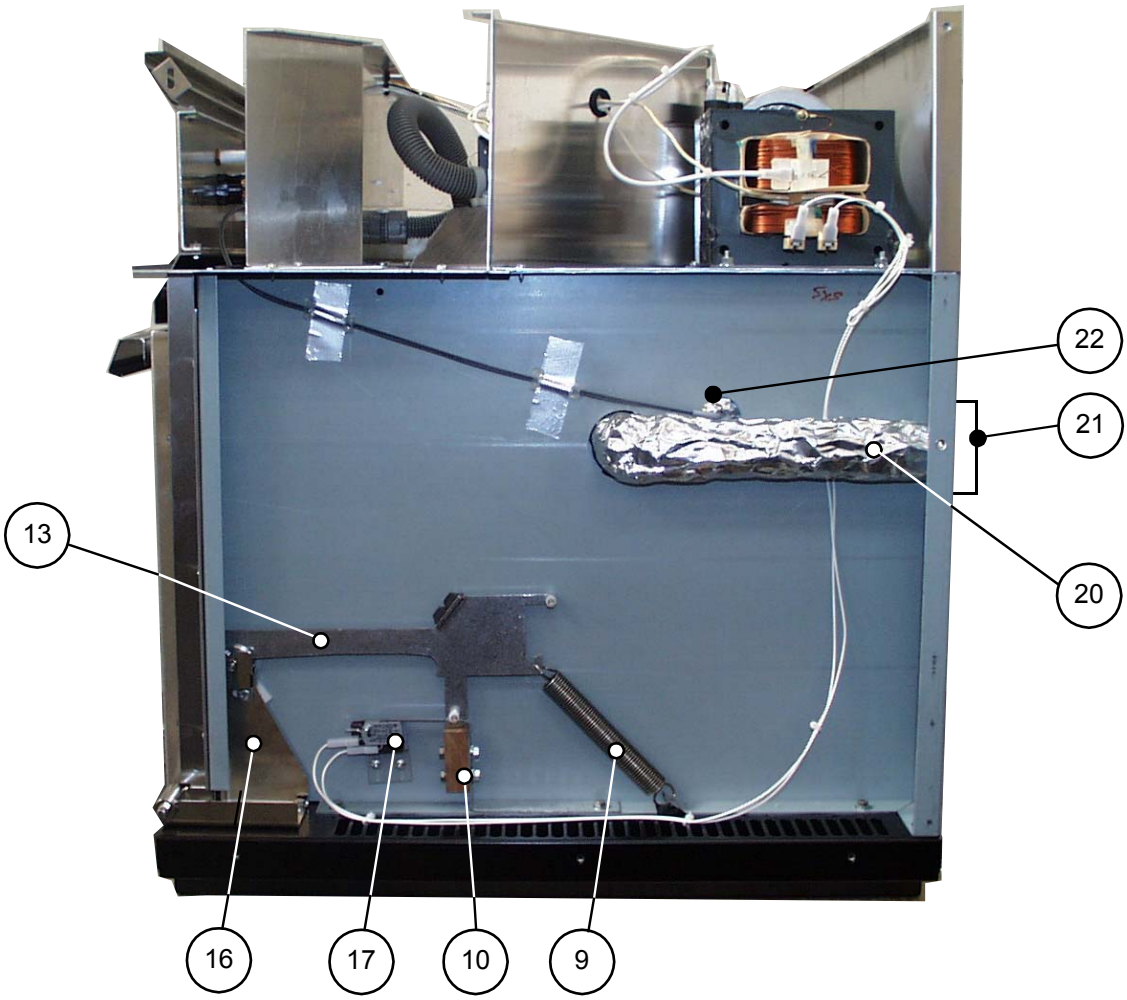


No	Description	EC 501	RD 501
1	Fuse holder	30Z0231	30Z0231
1A	Fuse 10 amp	30Z0217	30Z0217
2	Fuse holder	30Z0231	30Z0231
2A	Fuse 10 amp	30Z0217	30Z0217
3	Fuse holder	30Z0231	30Z0231
3A	Fuse 1 amp	30Z0957	30Z0957
4	Fuse holder	30Z0231	30Z0231
4A	Fuse 13 amp	30Z0168	30Z0168
5	Fuse holder	30Z0231	30Z0231
5A	Fuse 13 amp	30Z0168	30Z0168
6	Mains terminal block	31Z0149	31Z0149
7	Filter (Heater circuit)	30Z0997	30Z0997
8	Filter (Microwave circuit)	30Z0997	30Z0997
9	Door spring short	520000	520000
9	Door spring long	40C1141	40C1141
10	Door arm stop assembly	11C0279	11C0279
11	Microswitch (Primary)	30Z0240	30Z0240
12	Door hinge assembly (LH)*	11C0167	11C0167
13	Door arm assembly	11C0300	11C0300
14	Microswitch (Monitor)	30Z0240	30Z0240

* See page 17 for parts

Principle components:

Right side

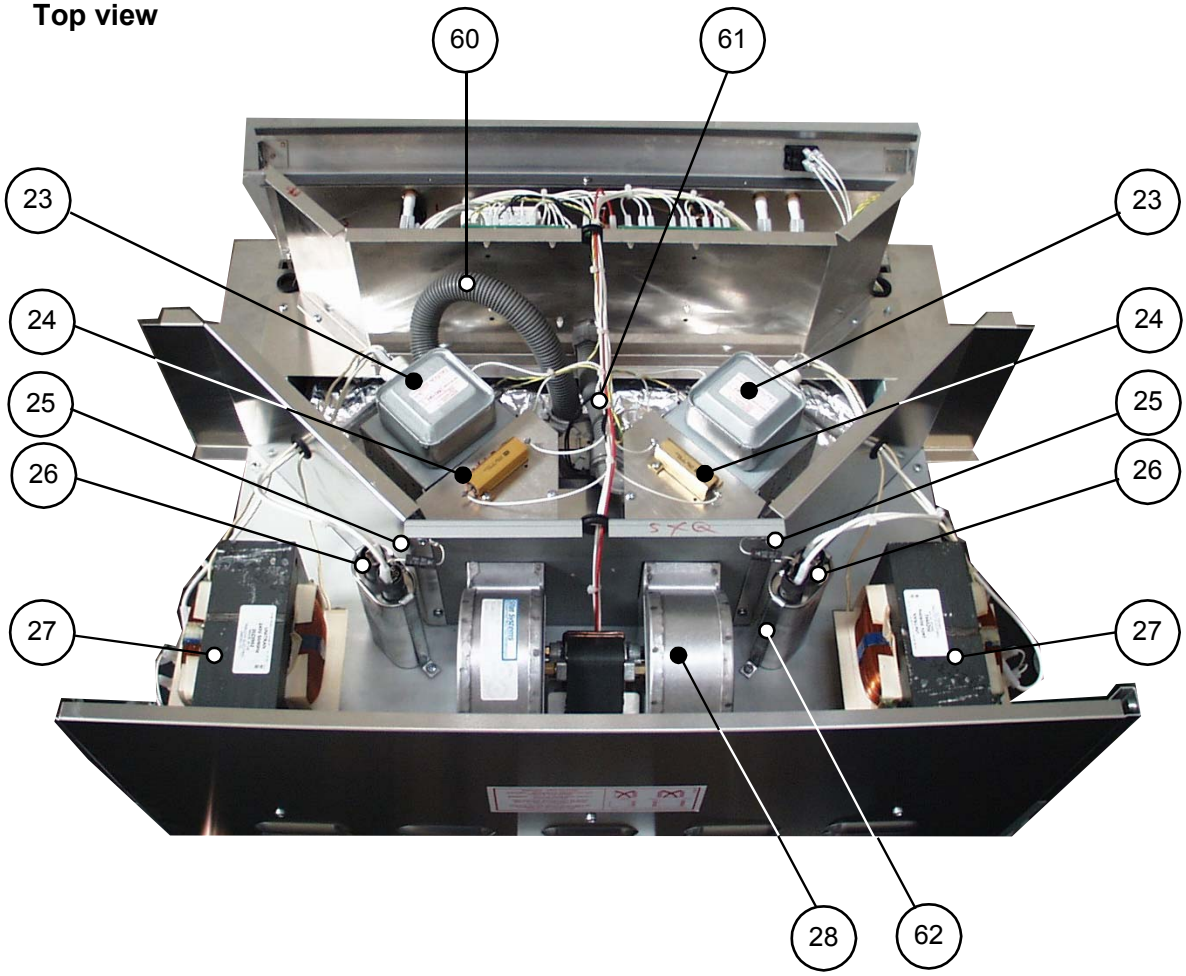


No	Description	EC 501	RD 501
9	Door spring short	520000	520000
9	Door spring long	40C1141	40C1141
10	Door arm stop assembly	11C0279	11C0279
13	Door arm assembly	11C0300	11C0300
16	Door hinge assembly (RH)*	11C0166	11C0166
17	Microswitch (Secondary)	30Z0240	30Z0240
20	Steam pipe	790046	790046
21	Steam vent guard	790061	790061
22	Temperature sensor	50E123	50E123

*See page 17 for parts

Principle components:

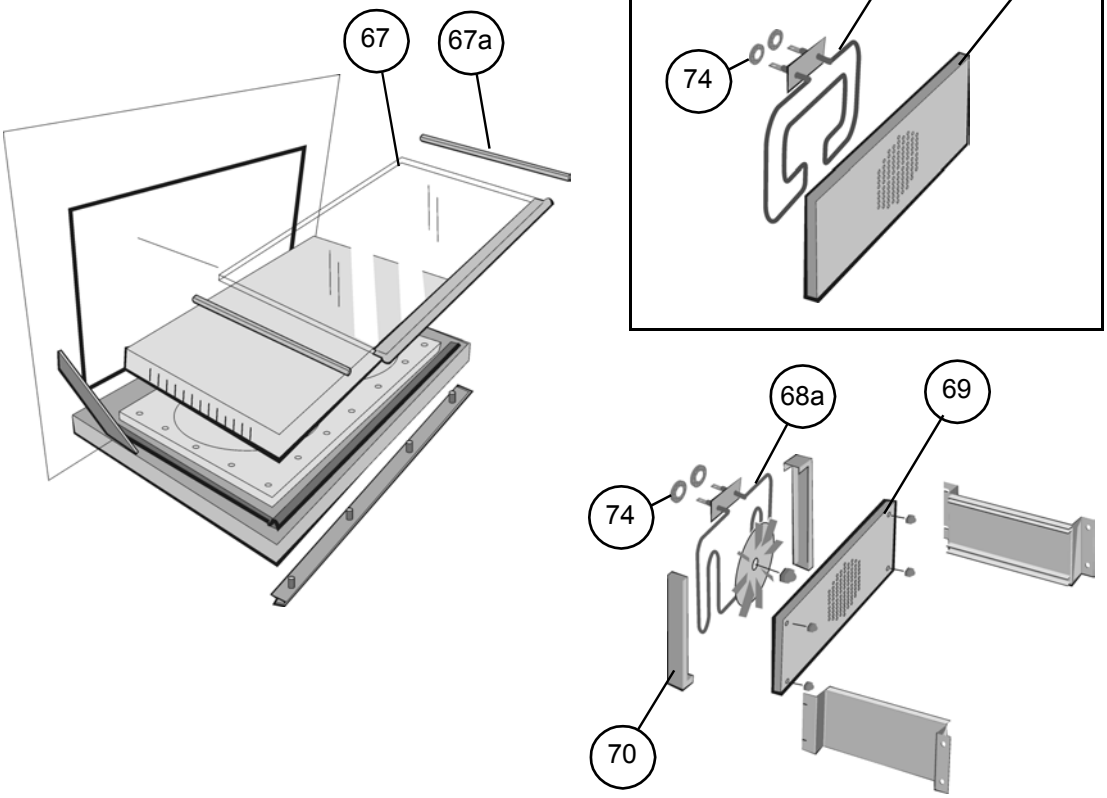
Top view



No	Description	EC 501	RD 501
23	Magnetron	30Z0264	30Z0264
24	Resistor Gold 470 R	30Z0283	30Z0283
25	HT diode	11C0266	11C0266
26	Capacitor 1.1µF	30Z1077	30Z1077
27	Transformer 220V 50Hz	30Z0083	30Z0083
27	Transformer 240V 50Hz	30Z1018	30Z1018
28	Twin blower motor	310110	310110
60	25mm OD Flexible conduit	314402	314402
61	20mm OD Flexible conduit	314401	314401
62	Capacitor clip	31Z0175	31Z0175

Principle components:

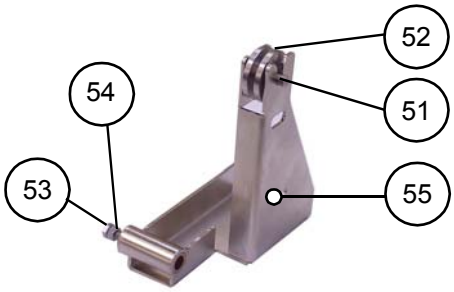
Door, roof & heater element



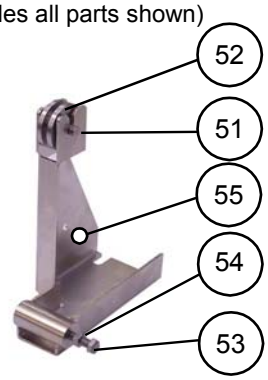
No	Description	EC 501	RD 501
67	Stirrer glass & long seals	40C0954	40C0954
67a	Stirrer glass short side seal	790052	790052
68	Heater element 2.5kW	——	790063
68a	Heater element 3.0kW	40C0948	——
69	Baffle	790047	790047
70	Baffle Side (2 No.)	11C0311	11C0311
71	Door seal kit	11C0292	11C0292
72	Door choke	790007	790007
74	Mesh washer RFI gasket	31Z5044	31Z5044
75	Shelf support	40C0864	40C0864

Principle components: (not shown in main views)

12 Left Hand Door Hinge Assembly
(Includes all parts shown)



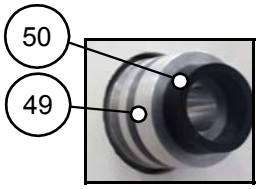
16 Right Hand Door Hinge Assembly
(Includes all parts shown)



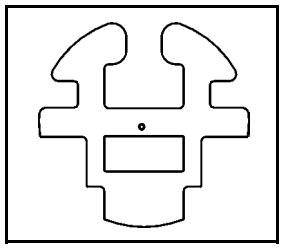
57 Hot air motor: Low Speed

57 Hot air motor: High Speed

Motor shaft screen and seal assembly

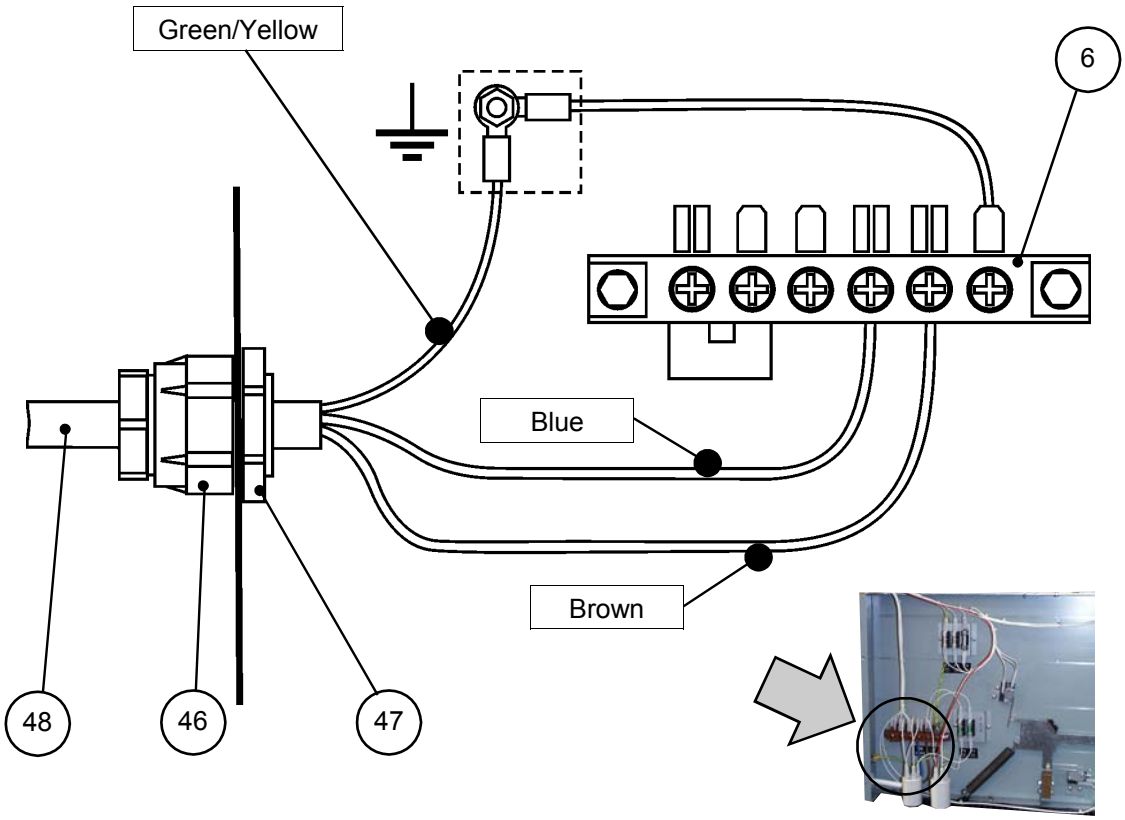


58 Stirrer motor assembly



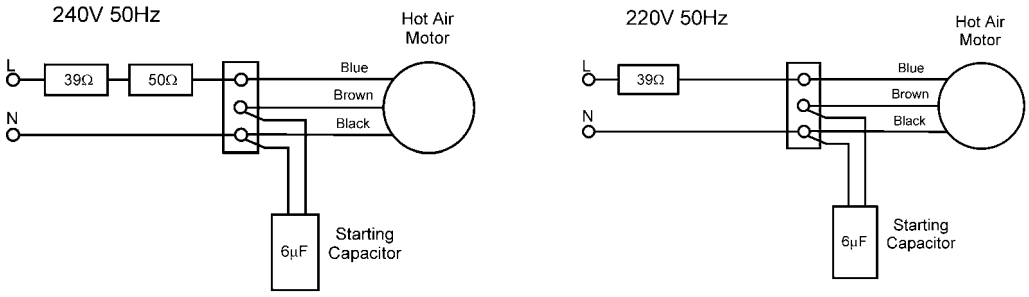
No.	Description	CTM3	CTM5
12	Door Hinge Assembly LH	11C0167	11C0167
16	Door Hinge Assembly RH	11C0166	11C0166
49	Motor shaft screen	40C1005	40C1005
50	Hot air motor damper/seal	40C1008	40C1008
51	Pin	790027	790027
52	Roller	40C0752	40C0752
53	M5 Hex/hd s/s Screw	101825	101825
54	M5 stainless steel Nut	80X7003	80X7003
55	LH Hinge bracket	790024	790024
56	RH Hinge bracket	790025	790025
57	Hot air motor Low Speed	11C0161	—
57	Hot air motor High Speed	—	11C0312
58	Stirrer motor assembly	11C0162	11C0162

Input wiring details



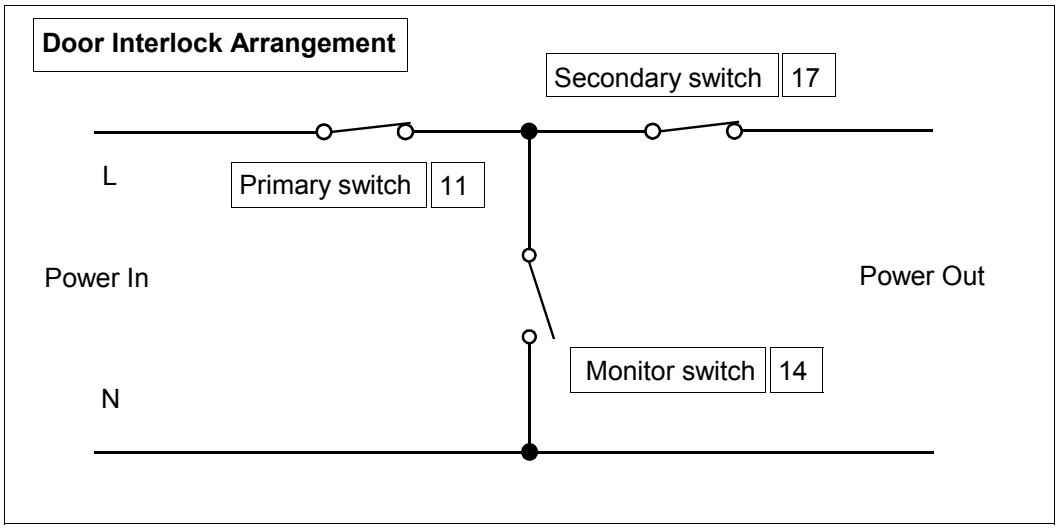
No	Description	EC 501	RD 501
6	Mains Terminal Block	31Z0149	31Z0149
46	Cable Gland	31Z1070	31Z1070
47	Gland Nut	31Z1082	31Z1082
48	Mains Cable 3 Core	31Z0148	31Z0148

Hot Air Motor connections and Wiring



Door interlock operation

The door on the oven is monitored by three microswitches. These are used in the conventional "Primary, Secondary and Monitor" switch arrangement shown below.
The switches operate as follows:



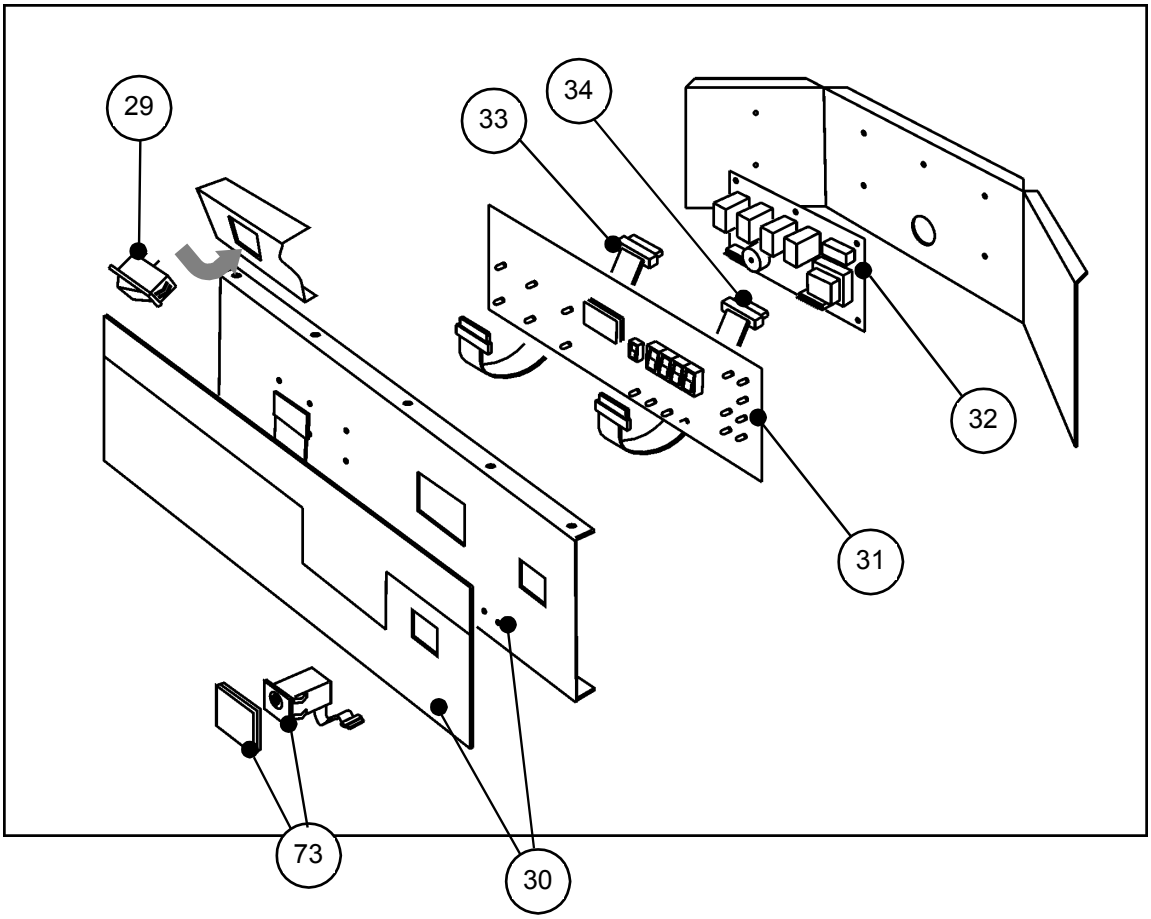
The diagram shows the microswitches in door closed position

1. **Primary Interlock [11 , Bottom left-hand] and**
   Secondary Interlock [17 , Bottom right-hand] Switches.
   Operate simultaneously.
   The Primary switch or Secondary switch will cut off the microwave emissions from the oven when the door is opened by breaking the mains supply circuit to the transformers.

2. **Monitor [14 ,Top left-hand Side]**
   The Monitor switch will produce a short circuit across the mains supply if the Primary interlock switch is faulty, thus blowing the microwave fuse and rendering the oven inoperative.
   The Secondary interlock switch will cut off the microwave emission if the other switches have failed.

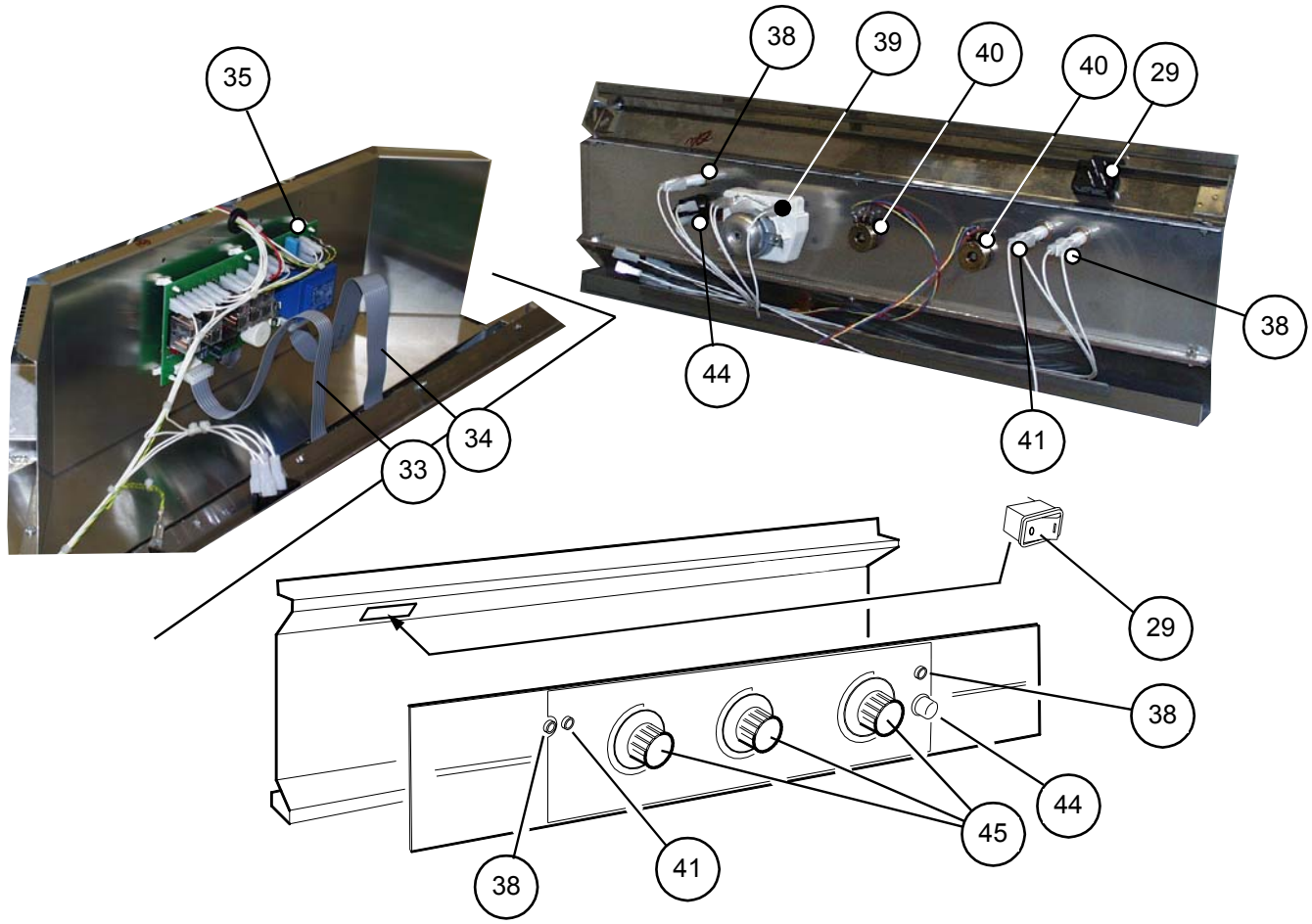
   Note:
   If operation of the Monitor switch has caused the Microwave Fuse to blow, the Primary and Monitor microswitches must be changed, as they may have been damaged by the high short-circuit currents involved.

Electronic control panel assembly: Mealstream EC501



No	Description	EC 501
29	On/Off Switch	30Z0503
30	Control Panel Assembly (without MenuKey)	11C0294
30	Control Panel Assy with MenuKey	11C0438
30	Locare Control Panel Assy with MenuKey	11C0458
31	Logic Board (without MenuKey)	11C0291
31	Logic Board with MenuKey	11C0377
32	Relay Board	11C0212
33	AC Ribbon connector	11M0116
34	DC Ribbon connector	11M0117
73	MenuKey Assembly	10C0148

Manual control panel assembly: Mealstream RD501



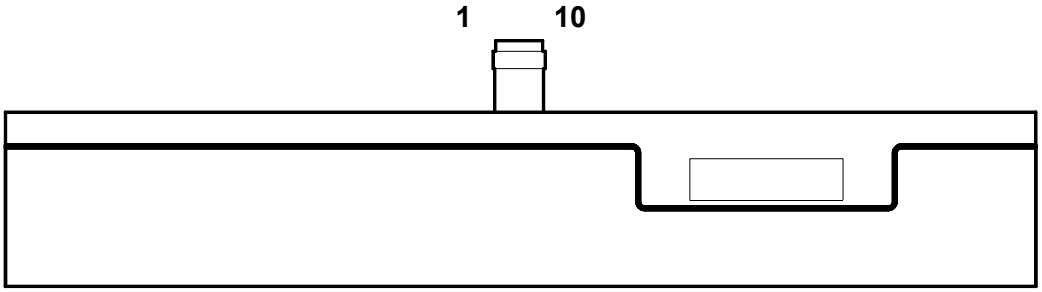
No	Description	RD 501
29	On /off switch	30Z0503
33	ac voltage connector 6 way	11M0116
34	dc voltage connector 10 way	11M0117
35	PCB Assembly	11C0295
38	Red Neon	316030
39	Timer	30Z0991
40	Potentiometer 5k	40C0892
41	Amber Neon	316031
43	Panel assembly	11C0307
44	Pushbutton	31Z0349
45	Control knob Red/Grey	11C0173
45	Control knob Blue	11C0406

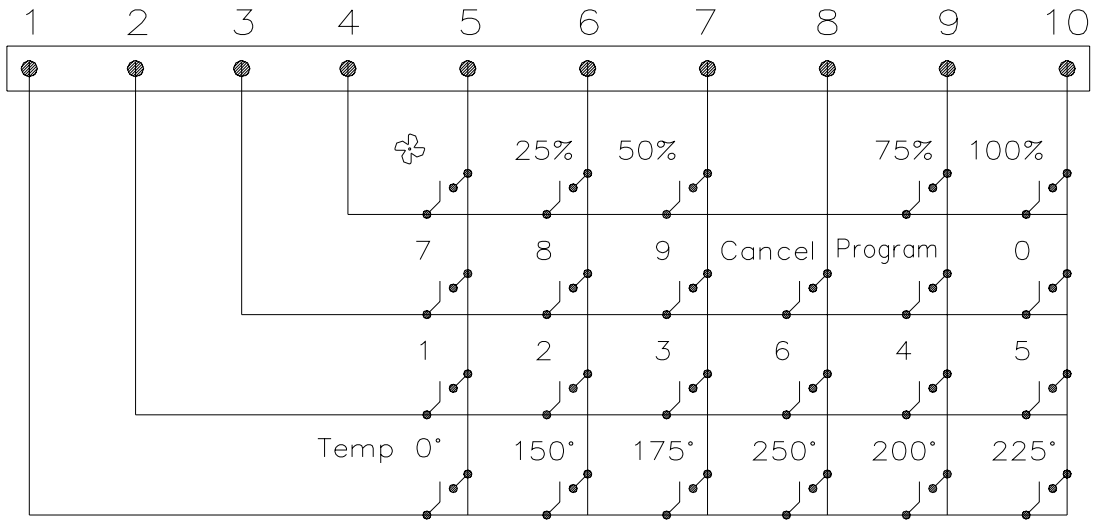
Membrane panel circuit

You will need:

A Digital Multi-meter (D.M.M.)

1. Isolate the oven from the mains supply.
2. Remove the Logic Assembly from the Control Panel Housing.
3. Unplug the membrane “tail” from the Logic PCB Assy.
4. Using a D.M.M., check for continuity between the correct terminals when the pads are pressed.
5. When the panel has been tested, re-assemble and re-test the control housing.





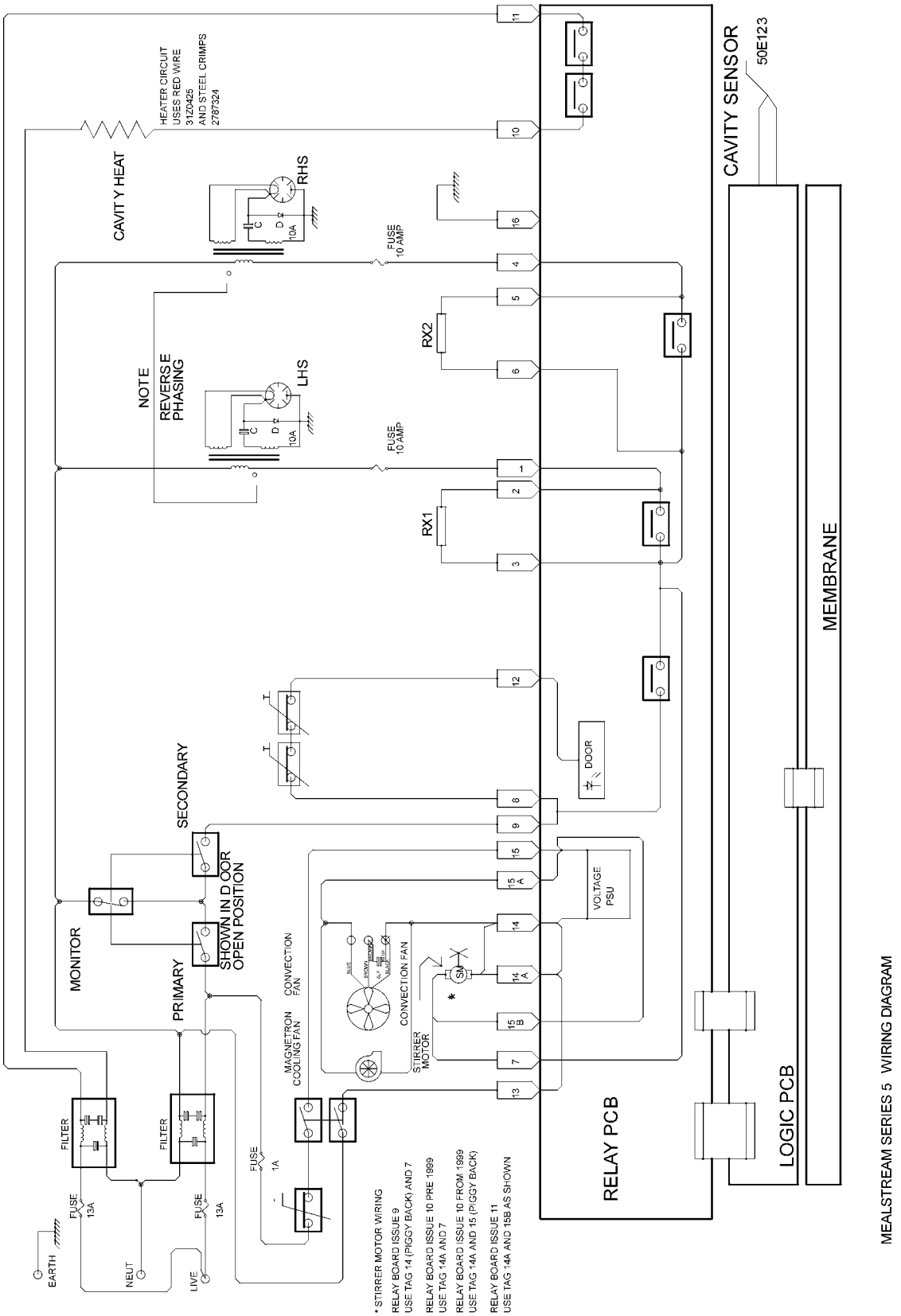
Part number identification chart:

No	Description	EC501	RD501
1	Fuse holder	30Z0231	30Z0231
1a	Fuse 10 amp	30Z0217	30Z0217
2	Fuse holder	30Z0231	30Z0231
2a	Fuse 10 amp	30Z0217	30Z0217
3	Fuse holder	30Z0231	30Z0231
3a	Fuse 1 amp	30Z0957	30Z0957
4	Fuse holder	30Z0231	30Z0231
4a	Fuse 13 amp	30Z0168	30Z0168
5	Fuse holder	30Z0231	30Z0231
5a	Fuse 13 amp	30Z0168	30Z0168
6	Mains terminal block	31Z0149	31Z0149
7	Filter (Microwave circuit)	30Z0997	30Z0997
8	Filter (Heater circuit)	30Z0997	30Z0997
9	Door spring short	520000	520000
9	Door spring long	40C1141	40C1141
10	Door arm stop assembly	11C0279	11C0279
11	Microswitch (Primary)	30Z0240	30Z0240
12	Door hinge assembly (LH)	11C0167	11C0167
13	Door arm assembly	11C0300	11C0300
14	Microswitch (Monitor)	30Z0240	30Z0240
16	Door hinge assembly (RH)	11C0166	11C0166
17	Microswitch (Secondary)	30Z0240	30Z0240
20	Steam pipe	790046	790046
21	Steam vent guard	790061	790061
22	Temperature sensor	50E123	50E123
23	Magnetron	30Z0264	30Z0264
24	Resistor Gold 470 R	30Z0283	30Z0283
25	HT diode	11C0266	11C0266
26	Capacitor 1.1 µF 50Hz	30Z1077	30Z1077
26	Capacitor 0.88µF 60Hz	30Z1075	30Z1075
27	Transformer 220V 50Hz	30Z1018	30Z1018
27	Transformer 240V 50Hz	30Z1183	30Z1183
27	Transformer 220V 60Hz	30Z1192	30Z1192
27	Transformer 240V 60Hz	30Z1191	30Z1191
28	Twin blower motor	310110	310110
29	On/Off Switch	30Z0503	30Z0503
30	Control Panel Assembly (without Menukey)	11C0294	———
30	Control Panel Assy with Menukey	11C0438	———
30	Locare Control Panel Assy with Menukey	11C0458	———

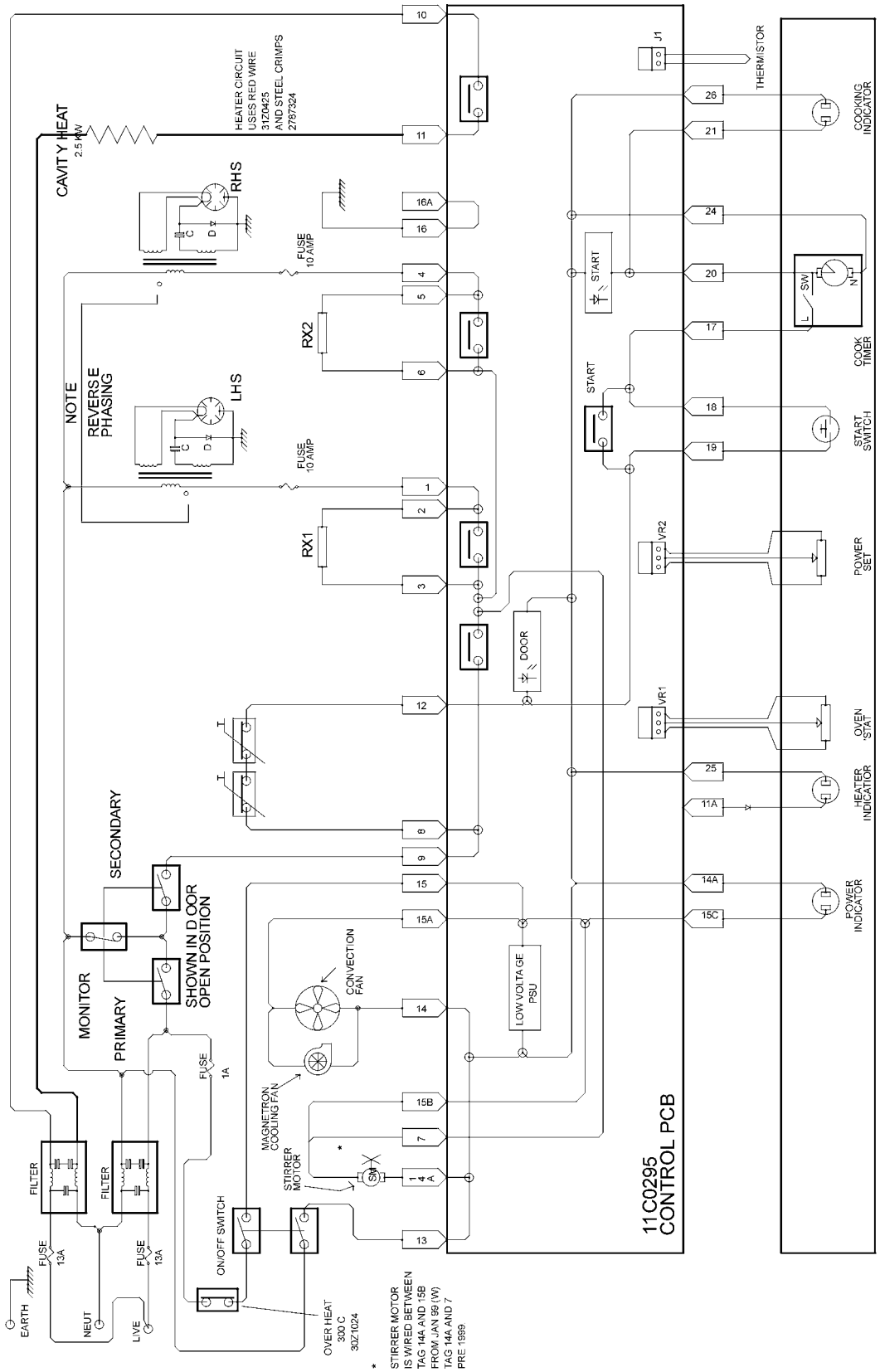
Part number identification chart:

No	Description	EC501	RD501
31	Logic Board (without Menukey)	11C0291	———
31	Logic Board with Menukey	11C0377	———
32	Relay Board	11C0212	———
33	AC Ribbon connector 6 way	11M0116	11M0116
34	DC Ribbon connector 10 way	11M0117	11M0117
35	PCB Assembly	———	11C0295
38	Red Neon	———	316030
39	Timer	———	30Z0991
40	Potentiometer 5k	———	40C0892
41	Amber Neon	———	316031
43	Panel assembly	———	11C0307
44	Pushbutton	———	31Z0349
45	Control knob Red/Grey	———	11C0173
45	Control knob Blue	———	11C0406
46	Cable Gland	31Z1070	31Z1070
47	Gland Nut	31Z1082	31Z1082
48	Mains Cable 3 Core	31Z0148	31Z0148
49	Motor shaft screen	40C1005	40C1005
50	Hot air motor damper/seal	40C1008	40C1008
51	Pin	790027	790027
52	Roller	40C0752	40C0752
53	Bolt	101825	101825
54	Nut	80X7003	80X7003
55	LH Hinge bracket	790024	790024
56	RH Hinge bracket	790025	790025
57	Hot air motor Low Speed	——	11C0161
57	Hot air motor High Speed	11C0312	——
58	Stirrer motor assembly	11C0162	11C0162
60	25mm OD Flexible conduit	314402	314402
61	20mm OD Flexible conduit	314401	314401
62	Capacitor clip	31Z0175	31Z0175
67	Stirrer glass	40C0954	40C0954
67a	Stirrer glass short side seal	790052	790052
68	Heater element 2.5kW	——	790063
68a	Heater element 3.0kW	40C0948	——
69	Baffle Plate	790047	790047
70	Baffle Side (2 No.)	11C0311	11C0311
71	Door seal kit	11C0292	11C0292
72	Door choke	790007	790007
73	MenuKey Assembly	10C0148	——
74	Mesh washer RFI gasket	31Z5044	31Z5044
75	Shelf support	40C0864	40C0864

Circuit diagram: EC501



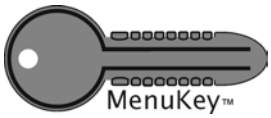
Circuit diagram: RD501, CTM3__CD2



MEALSTREAM CD2 WIRING DIAGRAM

APPENDIX 1: MenuKey Download Procedure

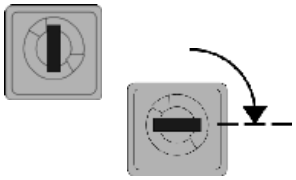
The MenuKey™ System automatically changes all the cooking programs on the numbered icon pads with the turn of a key.

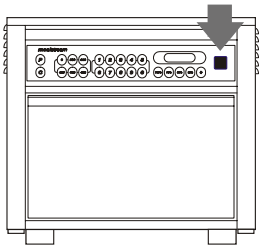


To change the menus on the oven:

1 Ensure the power switch is **off**.

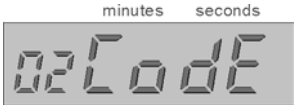
2 Lift the MenuKey cover in the front panel of the oven and put the key in the keyhole
Turn the key clockwise to the stop (¼ turn).
Do not remove the key at this stage.





3 Switch the power switch **on**.
The oven will now go through the program download sequence by displaying the following:

The Key Code example: Key C02

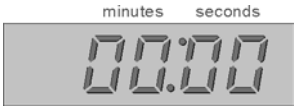


The number of programs and each program number on the key.

example: 27 Programs

When the display shows 00:00.

Remove the key and close the cover. The oven is now ready to use with the new programs.



EPS - FAIL - REDO
External Program System ERROR.
If the key is removed before the download is complete or the process is interrupted the display shows “EPS” then “FAIL” then “REDO”. Switch the oven off and begin the MenuKey download again.

To confirm the download is successful
Switch off the oven.
Switch on and the display briefly will show the following:

1. The new key code
2. 00:00 (oven ready to use)

If the download is not successful the key number will not be displayed and if the program pads are pressed an E3 error will display.

APPENDIX 2: Cleaning procedure

For the oven to operate at peak efficiency, the cavity, door and the air filters must be kept clean.

A daily cleaning routine will ensure that you comply with the required hygiene standards and will help to maintain and prolong the efficiency of your oven. Follow the SAFETY INSTRUCTIONS at the beginning of this manual.

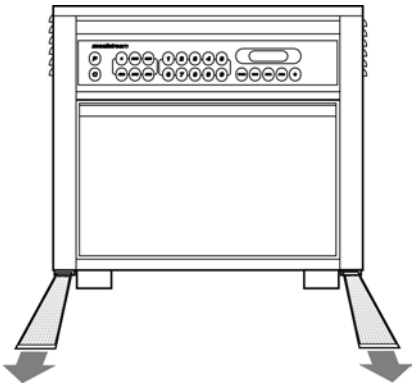
- **ALWAYS switch off at the electrical supply and allow oven to cool for at least 20 minutes before cleaning.**
- **As required, wipe out spillage's with disposable paper wipes**
- **NEVER use steel wool, knives or harsh abrasives on any part of the oven**

Faults arising from neglect or misuse including use without clean filters in place are not covered by the guarantee. Service visits as a result of such faults will be chargeable.

As with all electrical appliances, it is wise to have the electrical connections inspected periodically.

Cleaning the Air Filters

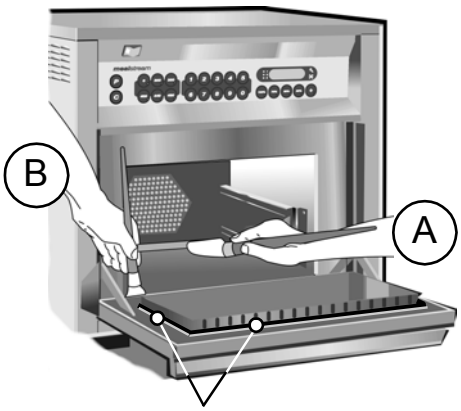
1 Remove the air filters from each side of the oven by sliding the filter out from the front.
2 Wash in clean, warm soapy water, rinse and pat dry. Slide back into position through slots.



DO NOT USE THE OVEN WITHOUT CLEAN AIR FILTERS IN POSITION

Cleaning the oven cavity and door

1 Remove food particles from the gap between the rear baffle plate and the floor of the oven with a clean, dry brush. (Location A)
Remove food particles from between the inside edge of the door and the front of the oven floor using a clean, dry brush. (Location B)
2 Apply non-caustic oven cleaner to interior surfaces except door seals. Leave for the recommended time. Wash off using a clean cloth and plenty of clean, warm water. Dry using a fresh, clean cloth.
3 Wipe hinges with a clean, damp cloth.
DO NOT apply lubricating oil.
4 Wipe door seals carefully with a clean damp cloth. Examine for signs of wear or damage.



Door Seal

Cleaning the control panel and exterior surfaces

Wipe down regularly with a damp cloth.

Hints and Tips for stubborn stains in the oven cavity

1 Switch on oven with microwave power only (without heat).
2 Place a container of water (1.5 litres) into the centre of the oven cavity.
3 Set microwave power to 100%.
4 Set timer to 30 minutes and press start button at end of steam cycle wipe out cavity with a clean cloth.

Manual corrections and modifications

Whilst every effort has been made to ensure that the information contained in this manual is accurate and complete, if you believe that an error has been made, or if you have any suggestions for how the manual could be improved, please fill in and return this form. A review of any forms returned will be made on a regular basis, and the manual will be updated if required.

Name	
Address	
Page on which error occurs (if applicable) - **Mealstream 501**	
Description of error	
Suggestion for improvement to manual	
Please return this form to:	Engineering Department Merrychef Ltd Station Road West Ash Vale Aldershot Hampshire GU12 5XA
Or Fax it on:	+44 (0) 1252 371007